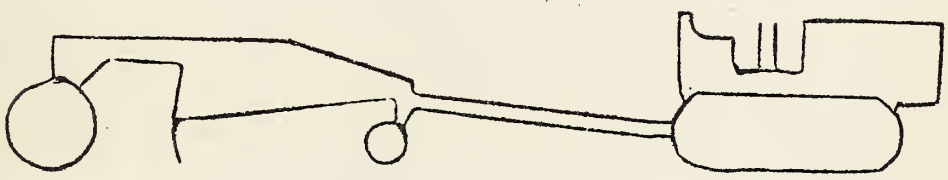
# CONSTRUCTION



# HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

Vol. 2 Washington, D. C. April 4, 1936. No. 7

## TRAILBUILDER REPAIRS

Submitted by L. S. Gross, Forest Supervisor - Region 7

The first step is to straighten the mold board as nearly as possible to its original shape. This is accomplished by first heating the bent section and then sledging the section back to shape.

After the mold board has been straightened as much as possible, a flat piece of 3/4" steel plate, as long as the board and 1" wider than the cutting edge, is placed on the mold board. The lower edge of the plate is placed in the same position as the lower edge of the original mold board which has been worn away. We have found that this distance of the lower edge of the reinforcing plate is usually about 3/4" below the lower side of the holes for the bolts that hold the cutting edge in place. These holes are then marked on the plate and the plate drilled the same as the original mold board. The plate is now ready for fitting to the shape of the mold board.

The reinforcing plate is bolted to the mold board and then heated and sledged to fit the curve of the supporting steel. During this heating and fitting process, the bolts are kept drawn up tight to help hold the new plate to the shape of the mold board. In order to securely hold this plate for welding, auxiliary 5/8" holes are drilled and bolts used to draw the plates tight as shown on the sketch.

This reinforcing plate is now ready to be welded to the mold board. Electric welding method is used for this, and the plate is welded along both edges and both ends. The ends and the back of the plate, however, have a Stodite weld to make as hard a wearing surface as possible. As

soon as the edges are welded, the auxiliary bolts are removed and the holes welded full to help to fasten the plate to the mold board. Any auxiliary holes not needed for bolts may be drilled through the mold board only and then welded full to form a tie to the plate.

In case the end holes on the mold board are worn away, a piece of steel, the thickness of the mold board, should be set in and welded to both the mold board and the new reinforcing plate.

Besides this steel reinforcing plate, the web frame in the back is usually broken in places. When this condition is found, the webs are securely welded to the mold board as is shown on the enclosed sketch. Then, too, an additional web is welded midway between the standard existing webs on the bottom half of the mold board. The end webs on the bottom half are also doubled and welded as shown on the sketch.

On the top half, plates are added and welded in place for reinforcement instead of webs, as are used on the bottom. These plates are placed and welded as shown on the sketch.

The addition of this reinforcing plate on the front of the mold board requires the substitution of 3" bolts for holding the cutting edge in place.

## REMOVABLE FRAMES FOR TRUCK COVERS

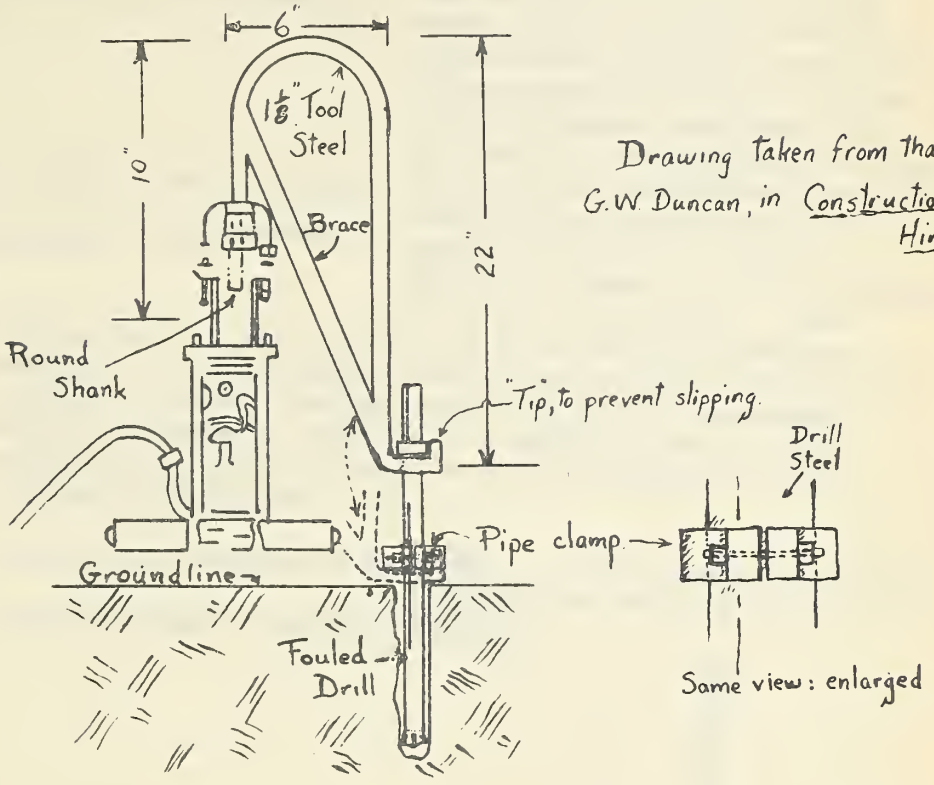
Contributed by Frank Willette, Junior Foreman C. & M., Region 9.

The canvas covers, which are used during the winter to protect men riding to work in ECW trucks, are frequently torn or the supporting bows broken when the covered trucks are used to haul wood. To avoid this damage, the covers should be removed. However, the operation of unfastening the canvas and removing four or five bows takes considerable time.

The problem has been solved on the Huron National Forest by mounting the cover bows on a frame which is slid onto the truck body and fits inside of the racks. Four men can put on or remove the entire assembly in a very short time. Since the canvas is permanently fastened to the removable frame, it is not subject to the damage which often results when the covers are stretched over or taken off of the bows. The seats, usually two by sixes, are rested on rails on the inside of the frame.

In the accompanying sketch, Page 3, the frame is shown in side, front and rear views. The latter view shows the frame in place on the truck body inside of the truck racks.

# JACKHAMMER in REVERSE.

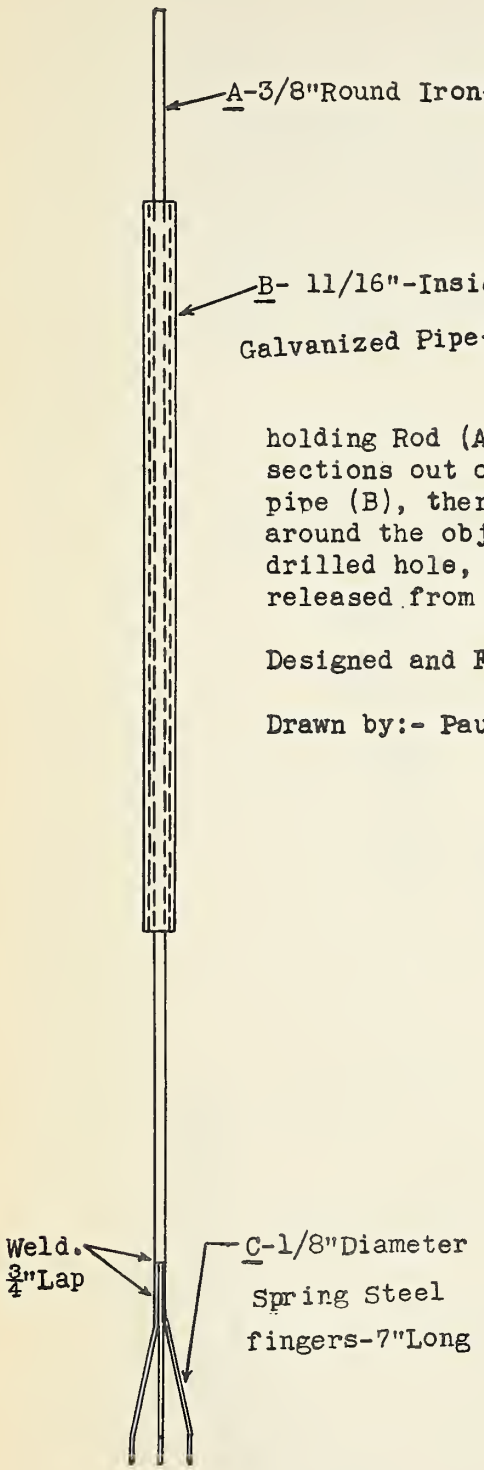



Drawing taken from that of G.W. Duncan, in Construction Hints

SUGGESTED IMPROVEMENT FOR "JACKHAMMER IN REVERSE" AS GIVEN IN CONSTRUCTION HINTS OF JANUARY 11, 1936, BY G.W. DUNCAN. THE IMPROVEMENTS CONSIST OF A BRACE, A "TIP" TO PREVENT SLIPPING, AND A PIPE CLAMP; ALL AS SHOWN ABOVE. THE PIPE CLAMP ELIMINATES UNNECESSARY LIFTING OF JACKHAMMER OFF THE GROUND. AS STEEL IS BROUGHT OUT OF HOLE, THE PIPE CLAMP MAY BE ADJUSTED LOWER ON THE DRILL STEEL IN ORDER THAT THE "SWEDE" WRENCH MAY BE HOOKED UNDER IT.

SUBMITTED BY:- PROJECT SUPT. FLANAGAN
AND FOREMAN SHANNON.
CCC CAMP F-48-A, REGION 3.

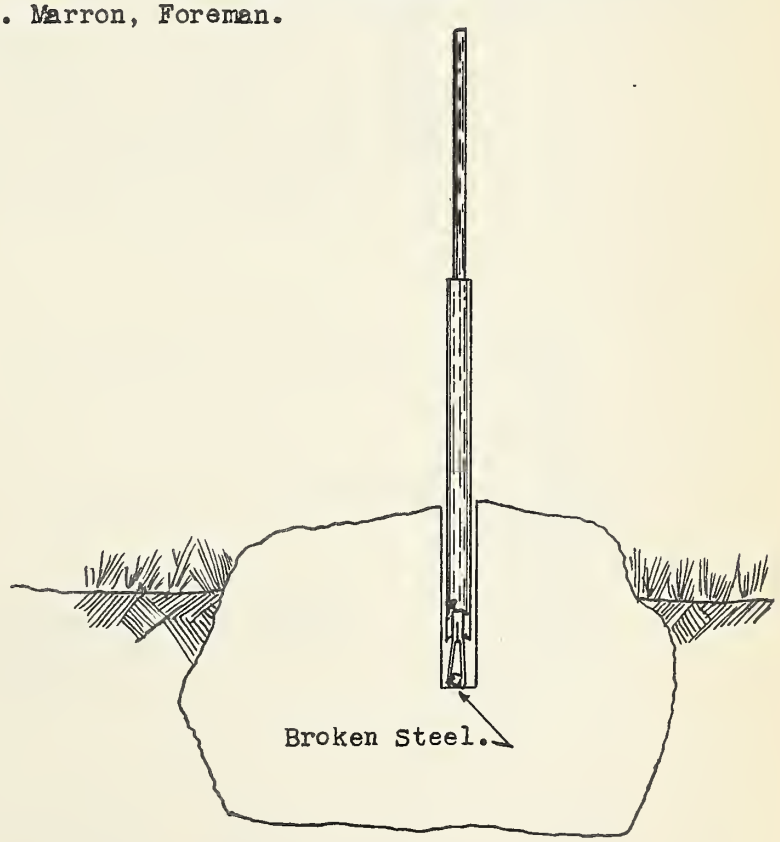
# TOOL FOR RETRIEVING BROKEN DRILL STEEL FROM DRILLED HOLE IN STONE

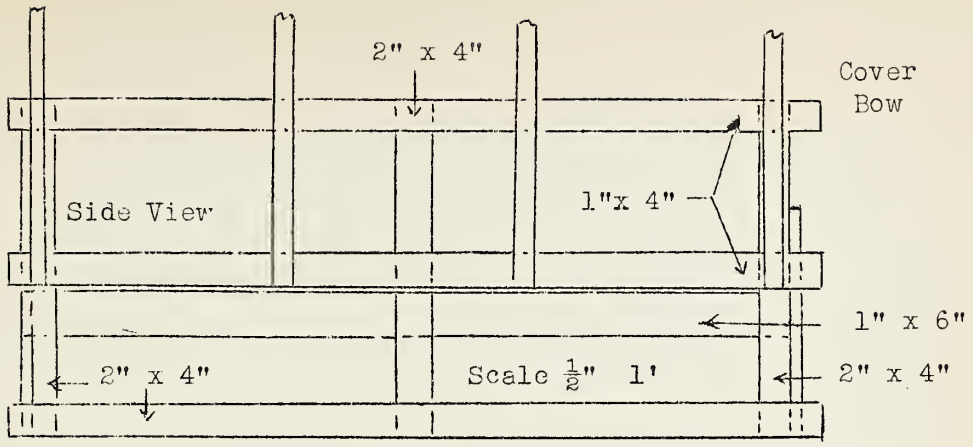


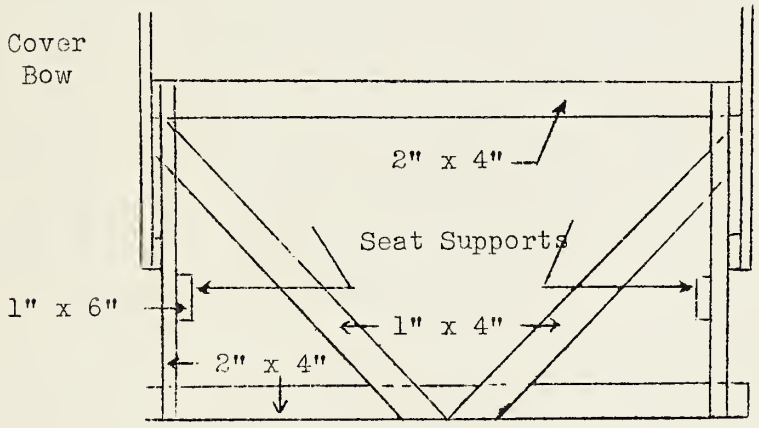

In retrieving broken drill steel from drilled hole, insert the rod (A) into hole placing steel fingers on end, over the broken steel, holding outer pipe (B) approximately one foot from end of fingers, then slide Pipe (B) down the drilled hole holding rod (A) over the broken steel, by pressing the pipe (B) down, the smaller diameter of pipe (B) gradually closes the steel fingers (C) around the object. Then holding Rod (A) and pipe (B) in this position draw both sections out of the hole, keeping the pressure downward on pipe (B), thereby keeping steel fingers (C) compressed around the object. When tool is entirely free of the drilled hole, pull (B) back on (A) and object will be released from fingers (C).

Designed and Fabricated by:- Martin Tiers, Ass't Blacksmith,
Camp S-54, Butler, N. J.

Drawn by:- Paul R. Marron, Foreman.






Frame shown here is for 1933 Chevrolet 1½ ton stake body truck (Design may be modified for other models)

Front Frame - Scale ½" = 1'